Announcements and Key Topics

EPA is currently conducting a five-year review of the remedy at the Keystone Sanitation Landfill Superfund Site, to be completed in September 2020.

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Background

The Keystone Sanitation Landfill Site is an inactive and privately-owned landfill approximately 40 acres in area located at 355 Clouser Road in Hanover (Union Township), Adams County, Pennsylvania. The Landfill is located in a residential and agricultural area on a 70-acre property bordered to the north by Clouser Road and to the south by Line Road. The southern boundary of the Landfill Property is located approximately 800 feet north of the Pennsylvania-Maryland border.

Keystone Sanitation Company operated the landfill from 1966 through 1990. The landfill operated without a proper liner or leachate containment system. In 1982, in accordance with Commonwealth of Pennsylvania permitting requirements, groundwater monitoring for volatile organic compounds (VOCs) was first conducted. VOC contamination was detected in the on-site potable well and in a nearby spring located east of the Landfill Property.

In 1984, sampling conducted in response to complaints from local citizens identified the presence of low levels of VOCs in some residential wells. Subsequent investigations confirmed this contamination was Site-related. In 1987, the Site was added to the National Priorities List (NPL) of the most hazardous waste sites, making it eligible for federal funding for cleanup. Operation and maintenance activities are ongoing.

What Has Been Done to Clean Up the Site?

In 1984, EPA initiated a Remedial Investigation and Feasibility Study (RI/FS) to delineate the nature and extent of contamination and develop and evaluate cleanup alternatives.

Based upon the findings of the RI/FS and after public comment, EPA selected a remedial action in 1990 in a document known as a Record of Decision (ROD). The selected remedy included the requirement for an impermeable cap over the landfill, installation of an active methane venting system, groundwater

extraction and treatment, and point-of-use treatment for the landfill's potable wells.

EPA modified the remedy in 1999 to require extraction and treatment of groundwater at off-site locations, installation of point-of-entry treatment systems on potable wells at distances up to one mile from the landfill boundary and established specific cleanup levels in groundwater for certain hazardous substances.

EPA again modified the remedy in 2000 to require capture of volatile organic compounds (VOCs), through landfill gas extraction wells and destruction of VOCs in a flare. The modification also permitted an upgrade of the existing soil cover over the landfill rather than installation of an impermeable cap.

Construction of all remedy components was completed by 2004.

What Is the Current Site Status?

The remedy is in place and effectively protects human health and the environment. Two separate groups of potentially responsible parties (PRPs) are performing remedial action activities under oversight of EPA.

The primary activities at the Site are on-going operation and maintenance (O&M) of the groundwater extraction system and the soil gas extraction system. O&M includes but is not limited to:

- Physical inspections of both systems;
- Groundwater sampling;
- Maintenance of point-of-entry treatment systems;
- Soil gas sampling and methane monitoring; and
- Mowing of the landfill cover grasses.

EPA has conducted several five-year reviews of the Site's remedy. These reviews ensure that the remedies put in place protect public health and the environment, and function as intended by Site decision documents. The most recent [HYPERLINK "http://semspub.epa.gov/src/document/03/2218456"], concluded that although several minor remedy performance issues requiring follow-up actions were identified, the remedy remains protective of human health and the environment. The next five-year review is scheduled for 2020.

In 2017, actions were taken based upon the findings of the 2015 Five-Year Review to improve the existing remedy. In the summer of 2017, a new extraction well was installed on the south side of the landfill adjacent to Line Road to

improve capture of contaminated groundwater. At the end of 2017, several new leachate monitoring points and shallow piezometers (a type of monitoring well designed to measure groundwater level) were installed at the landfill to help evaluate the effectiveness of the landfill gas extraction system.

Activity and Use Limitations

At this site, activity and use limitations that EPA calls institutional controls are in place. Institutional controls play an important role in site remedies because they reduce exposure to contamination by limiting land or resource use. They also guide human behavior. For instance, zoning restrictions prevent land uses – such as residential uses – that are not consistent with the level of cleanup.

For more background, see [HYPERLINK "https://www.epa.gov/superfund/superfund-institutional-controls"].

Institutional controls are in placed restricting construction and sale of the site. Additional information about the institutional controls are available in the [HYPERLINK "http://semspub.epa.gov/src/document/03/2218456"] (pages 15-16).

What Are the Risks at the Site?

The primary risk to human health at the Site is exposure to contaminants of concern (COCs) through use of groundwater. COCs are Site-related hazardous substances that include but are not limited to trichloroethene (also known by the acronym TCE), vinyl chloride, 1,4-dioxane, and mercury.

Point-of-use treatment units are maintained on several residential potable wells close to the landfill to ensure that no exposures occur.

Contaminant descriptions and risk factors are available from the [HYPERLINK "https://www.atsdr.cdc.gov/toxfaqs/index.asp"], an arm of the Centers for Disease Control.

Redevelopment at the Site

The Keystone Sanitation Landfill Superfund site is located in Union Township, Pennsylvania. The 40-acre landfill accepted municipal and industrial wastes, as well as construction debris, from 1966 until 1990. Site investigations identified contaminants in groundwater, surface water and sediments. EPA placed the site on the Superfund program's National Priorities List (NPL) in 1987. Cleanup included groundwater treatment and enhanced landfill gas extraction. Operation of the groundwater extraction and treatment system began in 2000, and

operation of the landfill gas extraction system began in 2003. Both systems continue to operate as part of long-term cleanup actions. Currently, grass covers the capped landfill part of the site, and there is one private home located on site.

In September 2016, the site achieved the EPA's Sitewide Ready for Anticipated Use (SWRAU) designation. The SWRAU designation means that all aspects of the Site cleanup are in place and have been achieved and no unacceptable risks are present. It also means that all land use restrictions or other controls required as part of the cleanup are in place and that the Site is ready for reuse (or future use).